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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,401	07/23/2003	Charles E. Taylor	SHPR-01361USB	9100

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EXAMINER

TERESINSKI, JOHN

ART UNIT	PAPER NUMBER
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2858

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/625,401

Applicant(s)

TAYLOR ET AL.

Examiner

John Teresinski

Art Unit

2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-22 and 29-31 is/are allowed.
- 6) ☒ Claim(s) 23-27 and 32-42 is/are rejected.
- 7) ☒ Claim(s) 28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/27/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 35 is objected to because of the following informalities: claim 35 recites “the high voltage pulse generator” which is lacking in antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 23, 32, 33, 35-37 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,009,764 to Siefkes et al..

Regarding claims 23 and 32, Siefkes et al. disclose temporarily shutting down an electro-kinetic system when an accumulated arcing time reaches a first threshold (column 7 lines 61-68) and shutting down the electro-kinetic system when the accumulated arcing time reaches a second threshold (column 8 lines 1-17), such that the electro-kinetic system is not restarted until a reset condition is satisfied (column 9 lines 52-68).

Regarding claim 33, Siefkes et al. disclose a housing (1) defining an inlet (7) and an outlet (2), an electro-kinetic system including a first electrode (5), a second electrode (4), and a high voltage generator disposed in the housing (column 12 lines 6-26), to create an airflow moving from the inlet to outlet (column 4 lines 50-67) and a micro-controller unit to control the electro-kinetic system (column 8 lines 19-28).

Art Unit: 2858

Regarding claim 35, Siefkes et al. disclose a high voltage generator coupled between the first and second electrodes (column 4 lines 50-67).

Regarding claim 36, Siefkes et al. disclose the micro-controller unit shuts down the electro-kinetic system by providing a low voltage pulse (column 12 lines 6-51).

Regarding claims 37 and 40, Siefkes et al. discloses turning off and on of the device (column 8 lines 1-2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 27, 34, 41 and 42, are rejected under 35 U.S.C. 103(a) as being unpatentable over Siefkes et al. in view of U.S. Patent No. 6,477,021 to Haun et al..

Regarding claims 27, 34, 41 and 42, Siefkes et al. disclose monitoring the current associated with the electro-kinetic system (column 7 lines 61-68) and shutting down the electro-kinetic system when the current reaches a threshold (column 8 lines 1-17). Siefkes et al. does not disclose incrementing a first count each time a monitored current value reaches a current threshold or a count threshold. Haun et al. disclose an arc fault detection system including incrementing a first count each time a monitored current value reaches a current threshold (column 5 lines 60-63) and shutting down/removing power to a system when the first count reaches a first count threshold (column 5 lines 24-29, 64-67). It would have been obvious to one

Art Unit: 2858

of ordinary skill in the art at the time the invention was made to include incrementing a first count each time a monitored current value reaches a current threshold and a count threshold as taught by Haun et al. into Siefkes et al. for the purpose of providing increased measurement capability.

Claims 24-26, 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siefkes et al. in view of U.S. Patent No. 6,368,391 to O'Hara et al..

Regarding claims 24-26, 38 and 39 Siefkes et al. does not disclose removal and return of the second electrode from the housing. O'Hara et al. disclose an electro-kinetic system including removal and return of the second electrode from the housing (column 1 lines 56-67 and column 2 lines 1-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include removal and return of the second electrode from the housing as taught by O'Hara et al. into Siefkes et al. for the purpose of maintaining operational efficiency of the electro-kinetic system.

Allowable Subject Matter

Claim 28 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Regarding claims 1, 11, 17, 28 and 30:

Art Unit: 2858

The primary reason for the allowance of claims 1, 11, 17, 28 and 30 is the inclusion of each time the first count reaches a first count threshold, temporarily shutting down the electro-kinetic system for a predetermined period, incrementing the second count, and re-initializing the first count, wherein the electro-kinetic system restarts after the predetermined period; and when the second count reaches a second count threshold, shutting down the electro-kinetic system until a reset condition is satisfied. It is these features found in the claim, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Claims 2-10 are allowed due to their dependency on claim 1.

Claims 12-16 are allowed due to their dependency on claim 11.

Claims 18-22 are allowed due to their dependency on claim 17.

Claim 31 is allowable due to dependency on claim 30.

Regarding claim 29:

The primary reason for the allowance of claim 29 is the inclusion of each time the first count reaches a first count threshold, temporarily lowering a potential difference between the first and second electrodes from a set level for a predetermined period, incrementing the second count, and re-initializing the first count, wherein the electro-kinetic system restarts after the predetermined period; and when the second count reaches a second count threshold, shutting down the electro-kinetic system until a reset condition is satisfied. It is these features found in the claim, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Teresinski whose telephone number is (571) 272-2235. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on (571) 272-2233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JT
JT

January 4, 2005


ANJAN DEB
PRIMARY EXAMINER